WEST Search History

DATE: Tuesday, July 09, 2002

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=ADJ			
L7	l4 and (excise or excision)	88	L7
L6	L5 and l4	0	L6
L5	activate near transgene	5	L5
L4	l2 and activate	141	L4
L3	l2 and activat$	213	L3
L2	l1 and site specific	234	L2
L1	plant and recombinase	384	L1

END OF SEARCH HISTORY

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1649axm

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2	Jan 25	BLAST(R) searching in REGISTRY available in STN on the Web
NEWS 3	Jan 29	FSTA has been reloaded and moves to weekly updates
NEWS 4	Feb 01	DKILIT now produced by FIZ Karlsruhe and has a new update frequency
NEWS 5	Feb 19	Access via Tymnet and SprintNet Eliminated Effective 3/31/02
NEWS 6	Mar 08	Gene Names now available in BIOSIS
NEWS 7	Mar 22	TOXLIT no longer available
NEWS 8	Mar 22	TRCTHERMO no longer available
NEWS 9	Mar 28	US Provisional Priorities searched with P in CA/CAplus and USPATFULL
NEWS 10	Mar 28	LIPINSKI/CALC added for property searching in REGISTRY
NEWS 11	Apr 02	PAPERCHEM no longer available on STN. Use PAPERCHEM2 instead.
NEWS 12	Apr 08	"Ask CAS" for self-help around the clock
NEWS 13	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 14	Apr 09	ZDB will be removed from STN
NEWS 15	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 16	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 17	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 18	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 19	Jun 03	New e-mail delivery for search results now available
NEWS 20	Jun 10	MEDLINE Reload
NEWS 21	Jun 10	PCTFULL has been reloaded
NEWS 22	Jul 02	FOREGE no longer contains STANDARDS file segment

NEWS EXPRESS	February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 17:50:51 ON 09 JUL 2002

```
=>  file agricola caplus biosis
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILE 'AGRICOLA' ENTERED AT 17:51:00 ON 09 JUL 2002

FILE 'CAPLUS' ENTERED AT 17:51:00 ON 09 JUL 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 17:51:00 ON 09 JUL 2002
COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC.(R)

=> s recombinase and plant
L1          171 RECOMBINASE AND PLANT

=> s l1 and excis?
L2           72 L1 AND EXCIS?

=> s l2 and (marker or transgene)
L3           40 L2 AND (MARKER OR TRANSGENE)

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4            31 DUP REM L3 (9 DUPLICATES REMOVED)

=> d 1-10 ti

L4   ANSWER 1 OF 31  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI   Nontransgenic crops from transgenic plants.

L4   ANSWER 2 OF 31  CAPLUS  COPYRIGHT 2002 ACS
TI   Two site-specific recombination system for excising
     transgene from plant leading to reduction of
     transmission of transgene

L4   ANSWER 3 OF 31  CAPLUS  COPYRIGHT 2002 ACS
TI   Self-excising polynucleotides containing the .phi.C31
     recombinase gene for use in dicot and monocot plants

L4   ANSWER 4 OF 31  CAPLUS  COPYRIGHT 2002 ACS
TI   Inducible expression constructs for site-specific recombinase
     genes and their use in regulated excision of transforming DNA
     from plant genomes with selection of transformed plants

L4   ANSWER 5 OF 31  CAPLUS  COPYRIGHT 2002 ACS
TI   Methods for the controlled, automatic excision of heterologous
     DNA from transgenic plants and DNA-excising gene cassettes for
     use therein

L4   ANSWER 6 OF 31  CAPLUS  COPYRIGHT 2002 ACS
TI   Site-specific recombination of genes for gene stacking in plant
     and animal chromosomes using bacteriophage .phi.C31 irreversible and Cre
     reversible recombinases

L4   ANSWER 7 OF 31  CAPLUS  COPYRIGHT 2002 ACS
TI   Molecular control of transgene escape by a repressible
     excision system using controlled recombinase expression

L4   ANSWER 8 OF 31  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI   Excision of selectable marker genes from transgenic
```

plants.

L4 ANSWER 9 OF 31 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
TI Cre/lox site-specific recombination controls the **excision** of a **transgene** from the rice genome

L4 ANSWER 10 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Nontransgenic crops from transgenic plants

=> d 2 pi

L4 ANSWER 2 OF 31 CAPLUS COPYRIGHT 2002 ACS

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002016624	A1	20020228	WO 2000-SG124	20000825

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

=> d 8 so

L4 ANSWER 8 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
SO Nature Biotechnology, (June, 2002) Vol. 20, No. 6, pp. 575-580.
http://www.nature.com/nbt/. print.
ISSN: 1087-0156.

=> d 8 abv
'ABV' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid
in at least one of the files. Refer to file specific help messages
or the STNGUIDE file for information on formats available in
individual files.
REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ab

L4 ANSWER 8 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Selectable **marker** genes are required to ensure the efficient genetic modification of crops. Economic incentives and safety concerns have prompted the development of several strategies (site-specific recombination, homologous recombination, transposition, and co-transformation) to eliminate these genes from the genome after they have fulfilled their purpose. Recently, chemically inducible site-specific **recombinase** systems have emerged as valuable tools for efficiently regulating the **excision** of transgenes when their expression is no longer required. The implementation of these strategies in crops and their further improvement will help to expedite widespread public acceptance of agricultural biotechnology.

=> d 8 au

L4 ANSWER 8 OF 31 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU Hare, Peter D.; Chua, Nam-Hai (1)

=> d 15 so

L4 ANSWER 15 OF 31 CAPLUS COPYRIGHT 2002 ACS

SO PCT Int. Appl., 90 pp.
CODEN: PIXXD2

=> d 15 pi

L4 ANSWER 15 OF 31 CAPLUS COPYRIGHT 2002 ACS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001036595	A2	20010525	WO 2000-US31600	20001116
	WO 2001036595	A3	20020124		
	W: AU, BR, CA, HU, IL, JP, KR, MX, NZ, PL, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	BR 2000008910	A	20020129	BR 2000-8910	20001116
	EP 1200617	A2	20020502	EP 2000-986220	20001116
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

=> d 20 so

L4 ANSWER 20 OF 31 CAPLUS COPYRIGHT 2002 ACS
SO Plant Journal (2000), 22(5), 461-469
CODEN: PLJUED; ISSN: 0960-7412

=> d 25 so

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS
SO U.S., 37 pp., Cont.-in-part of U.S. Ser. No. 861,802, abandoned.
CODEN: USXXAM

=> d 25 pi

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5658772	A	19970819	US 1994-281714	19940727
	JP 2001112477	A2	20010424	JP 2000-278280	19901219

=> d 23 so

L4 ANSWER 23 OF 31 AGRICOLA DUPLICATE 6
SO Plant molecular biology, May 1999. Vol. 40, No. 2. p. 223-235
Publisher: Dordrecht : Kluwer Academic Publishers.
CODEN: PMBIDB; ISSN: 0167-4412

=> d 24 so

L4 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2002 ACS
SO PCT Int. Appl., 85 pp.
CODEN: PIXXD2

=> d 24 pi

L4 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2002 ACS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9737012	A1	19971009	WO 1997-AU197	19970327

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,
PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ,
VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB,
GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,
ML, MR, NE, SN, TD, TG

CA 2250111	AA	19971009	CA 1997-2250111	19970327
AU 9721437	A1	19971022	AU 1997-21437	19970327
AU 717267	B2	20000323		
EP 922097	A1	19990616	EP 1997-913984	19970327
R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
JP 2000507446	T2	20000620	JP 1997-534743	19970327

=> d 24 ab

L4 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2002 ACS
AB A method of site-specific **excision** of a target gene from a transformation vector using a site-specific **recombinase** is described. This allows the transformation of the target organism with the removal of a selectable **marker** carried by the vector. **Excision** can be regulated or constitutive depending upon the promoter regulating the **recombinase** gene. As a result the same selectable **marker** can be used can be used in a no. of sequential transformations. The method can be generally used to regulate **transgene** expression in genetically-manipulated organisms, for example to promote differentiation, de-differentiation, or any unidirectional developmental shift of a target cell which requires the time-specific expression of a particular gene. The method is particularly suited to the promotion of specific organogeneses in plants using organogenesis-promoting transgenes, wherein the organs which subsequently develop in said plants are genetically transformed with a desired gene but lack organogenesis-promoting transgenes. The use flp/frt and cre/loxP recombination systems in tobacco (Nicotiana plumbaginifolia) is demonstrated.

=> d 25-31 ti

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Use of the Cre/loxP system in site-specific recombination in **plant** cells

L4 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI **Recombinase** systems in plants

L4 ANSWER 27 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Inducible ternary control of **transgene** expression and cell ablation in Drosophila

L4 ANSWER 28 OF 31 AGRICOLA
TI A system for insertional mutagenesis and chromosomal rearrangement using the Ds transposon and Cre-lox.

L4 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Exchange of gene activity in transgenic plants catalyzed by the Cre-lox site-specific recombination system

L4 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Directed **excision** of a **transgene** from the **plant** genome

L4 ANSWER 31 OF 31 AGRICOLA DUPLICATE 7
TI Gene transfer with subsequent removal of the selection gene from the host genome.

=> d 25-26 ab

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS
AB Transformation and expression vectors that use the Cre/loxP system to bring about site-specific recombination in **plant** cells are described. The system is of potential use in the regulation of gene expression in plants and in the development of new phenotypes. The bacteriophage P1 Cre **recombinase** gene under control of the 35S promoter was introduced into tobacco plants by sted methods. Plants carrying a cassette with a 5' hpt (hygromycin phosphotransferase) gene, a polyadenylation site flanked by a pair of loxP sites and an Hra (sulfonylurea-resistant acetolactate synthase) gene 3' to the polyadenylation site were also constructed. The Hra gene can only be expressed when the polyadenylation site is **excised** from the construct by loxP-mediated recombination, otherwise, the gene is lost during polyadenylation. These plants were hygromycin sensitive and sulfonylurea resistant, when crossed with the Cre cassette-contg. plants, a significant fraction were resistant to hygromycin and sulfonylurea.

L4 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2002 ACS
AB A review with several refs. Several site-specific DNA recombination systems have been shown to function in plants. **Excision** and integration of DNA relevant to genetic transformation have been described. Site-specific **excision** can remove selectable **marker** genes from **plant** genomes, permitting subsequent rounds of gene transfer with the same selection protocol. The elimination of **marker** genes from transgenic crop plants also eases concerns over the widespread release of antibiotic resistance genes. Site-specific integration of DNA has demonstrated the precise insertion of single-copy DNA into recombination sites previously placed in the **plant** genome. The reproducible insertion of DNA constructs into the same site permits anal. of gene alleles in the same chromosome configuration. Site-specific recombination has also been used to restructure **plant** genomes. Recombination between sites placed on the same or on different chromosomes has generated chromosome deletions, inversions and reciprocal chromosome translocations. Site-specific recombination of chromosomes in vitro can also fractionate large chromosome fragments. In this session, the authors will present findings on the ongoing development of site-specific recombination for monocot transformation, chromosome rearrangements, interspecies chromosome recombination, and anal. of **transgene** expression.

=> d 25 pi

L4 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2002 ACS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5658772	A	19970819	US 1994-281714	19940727
	JP 2001112477	A2	20010424	JP 2000-278280	19901219

=> d 26 so

L4 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2002 ACS
SO Biological Sciences Symposium, San Francisco, Oct. 19-23, 1997 (1997), 295-297 Publisher: TAPPI Press, Atlanta, Ga.
CODEN: 66GVA7

=> dd 29-31 ti
DD IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d 29-31 ti

L4 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Exchange of gene activity in transgenic plants catalyzed by the Cre-lox site-specific recombination system

L4 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2002 ACS
TI Directed **excision** of a **transgene** from the **plant** genome

L4 ANSWER 31 OF 31 AGRICOLA DUPLICATE 7
TI Gene transfer with subsequent removal of the selection gene from the host genome.

=> d 29-31 ab

L4 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2002 ACS
AB The Cre-lox site-specific recombination system of bacteriophage P1 was used to **excise** a firefly luciferase (luc) gene which had previously been incorporated into the tobacco genome. The **excision** event was due to site-specific DNA recombination between two lox sequences flanking the luc gene and was catalyzed by the Cre **recombinase** introduced by cross-fertilization. Recombination resulted in the fusion of a promoter with a distally located hygromycin phosphotransferase (hpt) coding sequence and the **excision** event was monitored as a phenotypic change from expression of luc to expression of hpt. The efficiency of recombination was estd. from the exchange of gene activity and confirmed by mol. anal. The relevance to potential applications of site-specific deletion-fusion events for chromosome engineering are discussed.

L4 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2002 ACS
AB The effectiveness of loxP-Cre directed **excision** of a **transgene** was examd. using phenotypic and mol. analyses. Two methods of combining the elements of this system, re-transformation and cross pollination, were found to produce different degrees of **excision** in the resulting plants. Two linked traits, .beta.-glucuronidase (GUS) and a gene encoding sulfonylurea-resistant acetolactate synthase (ALSr), were integrated into the genome of tobacco and Arabidopsis. The ALSr gene, bounded by loxP sites, was used as the selectable **marker** for transformation. The directed loss of the ALSr gene through Cre-mediated **excision** was demonstrated by the loss of resistance to sulfonylurea herbicides and by Southern blot anal. The .beta.-glucuronidase gene remained active. The **excision** efficiency varied in F1 progeny of different lox and Cre parents and was cor. with the Cre parent. Many of the lox .times. Cre F1 progeny were chimeric and some F2 progeny retained resistance to sulfonylureas. Re-transformation of lox/ALS/lox/GUS tobacco plants with cre led to much higher efficiency of **excision**. Lines of tobacco transformants carrying the GUS gene but producing only sulfonylurea-sensitive progeny were obtained using both approaches for introducing cre. Similarly, Arabidopsis lines with GUS activity but no sulfonylurea resistance were generated using cross pollinations.

L4 ANSWER 31 OF 31 AGRICOLA DUPLICATE 7
AB A general method of gene transfer that does not leave behind a selectable

marker in the host genome is described. A luciferase gene was introduced into the tobacco genome by using the hygromycin phosphotransferase gene (hpt) as a linked selectable **marker**. Flanked by recombination sites from the bacteriophage P1 Cre/lox recombination system, the hpt gene was subsequently **excised** from the **plant** genome by the Cre **recombinase**. The Cre-catalyzed **excision** event in the **plant** genome was precise and conservative--i.e., without loss or alteration of nucleotides in the recombinant site. After removal of the Cre-encoding locus by genetic segregation, plants were obtained that had incorporated only the desired **transgene**. Gene transfer without the incorporation of antibiotic-resistance markers in the host genome should ease public concerns over the field release of transgenic organisms expressing such traits. Moreover, it would obviate the need for different selectable markers in subsequent rounds of gene transfer into the same host.

```
=> d 29-31 so

L4   ANSWER 29 OF 31  CAPLUS  COPYRIGHT 2002 ACS
SO   Plant Mol. Biol. (1992), 18(2), 353-61
     CODEN: PMBIDB; ISSN: 0167-4412

L4   ANSWER 30 OF 31  CAPLUS  COPYRIGHT 2002 ACS
SO   Mol. Gen. Genet. (1992), 234(1), 49-59
     CODEN: MGGEAE; ISSN: 0026-8925

L4   ANSWER 31 OF 31  AGRICOLA                          DUPLICATE 7
SO   Proceedings of the National Academy of Sciences of the United States of
     America, Dec 1, 1991. Vol. 88, No. 23. p. 10558-10562
     Publisher: Washington, D.C. : National Academy of Sciences,
     CODEN: PNASA6; ISSN: 0027-8424


=> dis his

     (FILE 'HOME' ENTERED AT 17:50:51 ON 09 JUL 2002)

     FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 17:51:00 ON 09 JUL 2002
L1          171 S RECOMBINASE AND PLANT
L2           72 S L1 AND EXCIS?
L3           40 S L2 AND (MARKER OR TRANSGENE)
L4           31 DUP REM L3 (9 DUPLICATES REMOVED)

=> s l2 and (stop or block?)
L5           11 L2 AND (STOP OR BLOCK?)

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6           11 DUP REM L5 (0 DUPLICATES REMOVED)

=> d 1-11 ti

L6   ANSWER 1 OF 11  CAPLUS  COPYRIGHT 2002 ACS
TI   Two site-specific recombination system for excising transgene
     from plant leading to reduction of transmission of transgene

L6   ANSWER 2 OF 11  CAPLUS  COPYRIGHT 2002 ACS
TI   Inducible expression constructs for site-specific recombinase
     genes and their use in regulated excision of transforming DNA
     from plant genomes with selection of transformed plants

L6   ANSWER 3 OF 11  CAPLUS  COPYRIGHT 2002 ACS
TI   Molecular control of transgene escape by a repressible excision
```

system using controlled **recombinase** expression

L6 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Inducible expression constructs for site-specific **recombinase** genes and their use in regulated **excision** of transforming DNA from **plant** genomes

L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Methods for conditional transgene expression and trait removal in plants

L6 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI A method of assembling large, complex vectors for **plant** transformation using the cre/loxP site-specific recombination system

L6 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Gene therapy vectors utilizing recombination and their use in antitumor therapy

L6 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Control of **plant** gene expression.

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Regeneration of genetically modified whole **plant** from **plant** cell transfected with DNA sequence comprising regulatory regions and genes for phenotype-regulating protein, **recombinase**, and genetic repressor

L6 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Regeneration of genetically modified whole **plant** from **plant** cell transfected with DNA sequence comprising regulatory regions and genes for phenotype-regulating protein, **recombinase**, and genetic repressor

L6 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI **Recombinase**-directed chromosome engineering in plants

=> d 3 so

L6 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2002 ACS
SO U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U. S. Ser. No. 617,543.
CODEN: USXXCO

=> d 3 pi

L6 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2002 ACS

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002007500	A1	20020117	US 2001-783292	20010215
WO 2002006498	A1	20020124	WO 2001-FI670	20010716

W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

=> d 4 so

L6 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2002 ACS
SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2

=> d 4 pi

L6 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2002 ACS

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001088164	A1	20011122	WO 2001-DE780	20010228

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

DE 10024740	A1	20011129	DE 2000-10024740	20000519

=> d 5-11 ti

L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Methods for conditional transgene expression and trait removal in plants

L6 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI A method of assembling large, complex vectors for **plant** transformation using the cre/loxP site-specific recombination system

L6 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Gene therapy vectors utilizing recombination and their use in antitumor therapy

L6 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Control of **plant** gene expression.

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Regeneration of genetically modified whole **plant** from **plant** cell transfected with DNA sequence comprising regulatory regions and genes for phenotype-regulating protein, **recombinase**, and genetic repressor

L6 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI Regeneration of genetically modified whole **plant** from **plant** cell transfected with DNA sequence comprising regulatory regions and genes for phenotype-regulating protein, **recombinase**, and genetic repressor

L6 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2002 ACS
TI **Recombinase**-directed chromosome engineering in plants

=> d 5-11 ab

L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS
AB This invention relates to constructs for the conditional or regulated expression or **excision** of transgenes in plants using site-specific **recombinase** systems. The constructs comprise a variety of constitutive, inducible, tissue specific or developmental stage-specific promoters operably linked to either a transgene or the

elements of one or more site-specific **recombinase** system. By matching promoters, responsive to various inducers, **plant** tissues or **plant** developmental states with the **recombinase** systems, **stop** fragments and transgenes, virtually any trait may be expressed or **excised** at any **plant** development stage or in any **plant** generation.

L6 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2002 ACS

AB The present invention relates to a novel unconventional method for cloning large and multiple segments of DNA into a vector that makes use of the cre/loxP site-specific recombination system. More specifically the present invention provides nucleic acid sequences for selectively regulating site-specific recombination in favor of insertion of multiple segments of DNA in a **plant** transformation vector. In particular, the invention relates to the use of sequences in the recombination site that can be used in gene-stacking or other multigenic cloning strategies. The method uses an array of variants of the canonical loxP site that can recombine to generate loxP sites that are no longer functional and so **block** cre-mediated **excision** after recombination. In this manner, the sequences needed for the vector can be sequentially incorporated into the construct ("stacking"). The method can be used in combination with other site-specific recombination systems such as FLP/FRT. The compatibility of an array of loxP variants in site-specific recombination was tested. Some combinations of variants recombined at near-normal rates but others did not recombine at all and the sequences were organized into compatibility classes. Use of combinations of loxP sites to integrate one plasmid into another is demonstrated. Use of sets of loxP variants to stack sequences is also demonstrated by constructing a plasmid carrying genes conferring resistance to potato leafroll virus, potato virus Y, glyphosate and Colorado potato beetle. Trangenic potato plants expressing all four genes were obtained from single transformation events.

L6 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2002 ACS

AB Vector material useful for antitumor therapy contains: (a) a tumor cell sensitizing gene or genes of which expression in a tumor cell yields a sensitizing gene expression product having a potential to cause tumor cells to be killed and destroyed, or to be eliminated, or otherwise to be inactivated, or to be rendered sensitive and/or vulnerable to destruction; (b) a sensitizing gene promoter; (c) at least one control gene; and (d) a control gene expression regulatory system responsive in use in a transfected cell to the effect of a predetd. exogenous or endogenous expression inducing influence, e.g. ionizing radiation, heat or a chem. inducing agent, so as to induce expression of the control gene to yield an expression product having a capacity to establish an operative linkage between the sensitizing gene promoter and the sensitizing gene or genes effective to trigger and switch on or permit continuous or permanent expression of the latter to bring about continuous prodn. of the sensitizing gene expression product. This is preferably achieved by arranging for the control gene to encode a **recombinase** enzyme that acts on **recombinase** target sites in a Cre-loxP or Flp-frt site specific recombination system to remove an expression preventing **stop** cassette sequence between the sensitizing gene(s) and the promoter for the latter. In some embodiments the tumor sensitizing gene expression product will be an enzyme or other bioactive agent that can activate an inactive prodrug. This vector system has wide applications to cancer therapy. The objective of the present study is to provide improved means and methods for selectively killing or eliminating tumor cells using a low or transient dose of a gene expression agent to switch on a gene that produces an expression product within tumor tissue that has the effect of bringing the destruction or removal of tumor cells. Here, expression of the tumor sensitizing gene thymidine kinase results in gancyclovir activation and cell killing. This silenced or dormant killing mechanism can be activated by exposing the cells to an appropriate

stimulating influence which may include ionizing radiation or heat or chem. treatment. In this system the control gene encodes a **recombinase** enzyme that acts on **recombinase** agent sites to modify the vector material to establish operative linkage between sensitizing gene expression regulatory system and the sensitizing gene. The control gene may also encode a fusion proteins consisting of a **recombinase** and ana intercellular trafficking protein such as virion protein VP22. An exogenous chem. inducing agent may be in the form of a hormone that interacts with a receptor that interacts with a hormone responsive element in the control gene expression system. Use of the vector to manuf. a medicament for use in antitumor therapy is described also.

L6 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB A method for making a genetically modified **plant** comprising regenerating a whole **plant** from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being separated by a **blocking** sequence flanked on either side by specific **excision** sequences, a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a repressible promoter, and a third gene that encodes the repressor specific for the repressible promoter. Also a method for making a genetically modified hybrid **plant** by hybridizing a first **plant** regenerated from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being separated by a **blocking** sequence flanked on either side by specific **excision** sequences to a second **plant** regenerated from a second **plant** cell that has been transfected with DNA sequences comprising a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a promoter that is active during seed germination, and growing a hybrid **plant** from the hybrid seed. **Plant** cells, **plant** tissues, **plant** seed and whole plants containing the above DNA sequences are also claimed.

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS
AB A method for making a genetically modified **plant** comprising regenerating a whole **plant** from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter,the gene and promoter being sepd. by a **blocking** sequence flanked by specific **excision** sequences, a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a repressible promoter, and a third gene that encodes the repressor specific for the repressible promoter. Also a method for making a genetically modified hybrid **plant** by hybridizing a first **plant** regenerated from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being sepd. by a **blocking** sequence flanked by specific **excision** sequences to a second **plant** regenerated from a second **plant** cell that has been transfected with DNA sequences comprising a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a promoter that is active during seed germination, and growing a hybrid **plant** from the hybrid seed. **Plant** cells, **plant** tissues, **plant** seed and whole plants contg. the above DNA sequences are also claimed.

L6 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2002 ACS
AB A method for making a genetically modified **plant** comprising regenerating a whole **plant** from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter,the gene and promoter being sepd. by a **blocking** sequence flanked by specific **excision** sequences, a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a repressible promoter, and a third gene that encodes the repressor specific for the repressible promoter. Also a method for making a genetically modified hybrid **plant** by hybridizing a first **plant** regenerated from a **plant** cell that has been transfected with DNA sequences comprising a first gene whose expression results in an altered **plant** phenotype linked to a transiently active promoter, the gene and promoter being sepd. by a **blocking** sequence flanked by specific **excision** sequences to a second **plant** regenerated from a second **plant** cell that has been transfected with DNA sequences comprising a second gene that encodes a **recombinase** specific for the specific **excision** sequences linked to a promoter that is active during seed germination, and growing a hybrid **plant** from the hybrid seed. **Plant** cells, **plant** tissues, **plant** seed and whole plants contg. the above DNA sequences are also claimed.

L6 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2002 ACS
AB A review with 37 refs. Directed recombination of specific sequences can be utilized to bring about profound changes in gene expression and genome organization. In past years, the deployment of site-specific recombination systems in the **plant** genome has produced site-directed **excision** and inversion of transgenes, integration of exogenous DNA into genomic recombination sites, and the rearrangement of chromosome segments. In particular, the rearrangement events that involve large segments of host DNA represent a novel approach to genome engineering and show promise for precise, predictable and reproducible restructuring of higher eukaryotic genomes. In the light of recent reports of **plant** genome synteny, the concept of reshuffling **blocks** of chromosome information into new combinations may lead to exciting opportunities for creating new **plant** varieties for basic research and practical applications.

=> d 5 pi

L6 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2002 ACS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001036595	A2	20010525	WO 2000-US31600	20001116
	WO 2001036595	A3	20020124		
	W: AU, BR, CA, HU, IL, JP, KR, MX, NZ, PL, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	BR 2000008910	A	20020129	BR 2000-8910	20001116
	EP 1200617	A2	20020502	EP 2000-986220	20001116
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

=> d 9 pi

L6 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2002 ACS

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5723765	A	19980303	US 1995-477559	19950607

```
CA 2196410          AA    19960215        CA 1995-2196410   19950731
WO 9604393          A2    19960215        WO 1995-US9595    19950731
WO 9604393          A3    19960307
    W:  AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
        GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD,
        MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ,
        TT, UA
    RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
        LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
        SN, TD, TG
AU 9532050          A1    19960304        AU 1995-32050     19950731
AU 696668           B2    19980917
EP 775212           A2    19970528        EP 1995-928199    19950731
    R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
CN 1161717          A     19971008        CN 1995-194442    19950731
BR 9508471          A     19971028        BR 1995-8471      19950731
JP 10503377         T2    19980331        JP 1995-506650    19950731
ZA 9506410          A     19960311        ZA 1995-6410      19950801
US 5925808          A     19990720        US 1997-995161    19971219
US 5977441          A     19991102        US 1998-63927     19980422


=> d 9 pi

L6   ANSWER 9 OF 11  CAPLUS  COPYRIGHT 2002 ACS
     PATENT NO.          KIND  DATE            APPLICATION NO.  DATE
     ---------------     ----  --------        ---------------  --------
PI   US 5723765          A     19980303        US 1995-477559   19950607
     CA 2196410          AA    19960215        CA 1995-2196410  19950731
     WO 9604393          A2    19960215        WO 1995-US9595   19950731
     WO 9604393          A3    19960307
         W:  AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI,
             GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD,
             MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ,
             TT, UA
         RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
             LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
             SN, TD, TG
     AU 9532050          A1    19960304        AU 1995-32050    19950731
     AU 696668           B2    19980917
     EP 775212           A2    19970528        EP 1995-928199   19950731
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
     CN 1161717          A     19971008        CN 1995-194442   19950731
     BR 9508471          A     19971028        BR 1995-8471     19950731
     JP 10503377         T2    19980331        JP 1995-506650   19950731
     ZA 9506410          A     19960311        ZA 1995-6410     19950801
     US 5925808          A     19990720        US 1997-995161   19971219
     US 5977441          A     19991102        US 1998-63927    19980422


=> d 11 so

L6   ANSWER 11 OF 11  CAPLUS  COPYRIGHT 2002 ACS
SO   Curr. Opin. Biotechnol. (1996), 7(2), 181-6
     CODEN: CUOBE3; ISSN: 0958-1669
```